

## CLAIMS

1. A base station apparatus comprising:

a selection section that selects a mobile station to which a data channel is assigned, in accordance with both channel quality of a control channel for transmitting control information necessary for data transmission on a data channel and channel quality of the data channel; and

a transmitting section that performs radio transmission of data to a selected mobile station.

2. The base station apparatus according to claim 1, wherein the selection section selects a mobile station for which the channel quality of the control channel is greater than or equal to a threshold value set according to a total number of mobile stations currently accommodated by the base station apparatus.

3. The base station apparatus according to claim 1, wherein the selection section selects mobile stations in high-to-low order of the channel quality of the control channel up to number of selections set according to a total number of mobile stations currently accommodated by the base station apparatus.

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4. The base station apparatus according to claim 1, wherein the selection section performs selection in

accordance with the channel quality of the data channel after performing selection in accordance with the channel quality of the control channel.

5     5.     The base station apparatus according to claim 1, wherein the selection section selects a mobile station to which a data channel is assigned, in accordance with channel quality of a downlink control channel for transmitting data channel assignment information or MCS  
10    information.

6.     The base station apparatus according to claim 1, wherein the selection section selects a mobile station to which a data channel is assigned, in accordance with  
15    channel quality of an uplink control channel for transmitting ACK or NACK.

7.     The base station apparatus according to claim 1, wherein the selection section performs selection in  
20    accordance with both channel quality of the control channel and the channel quality of the data channel only for a mobile station whose distance from the base station is greater than or equal to a predetermined value.

25    8.     A mobile station apparatus comprising:  
         a first measuring section that measures channel quality of a control channel;

a second measuring section that measures channel quality of a data channel;

a generation section that generates channel quality information from the channel quality of the data channel;

5 and

a determination section that determines whether or not the channel quality information is to be transmitted, in accordance with the channel quality of the control channel.

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9. The mobile station apparatus according to claim 8, wherein the determination section determines that the channel quality information is to be transmitted when the channel quality of the control channel is greater than or equal to a threshold value, and determines that the channel quality information is not to be transmitted when the channel quality of the control channel is less than a threshold value.

20 10. The mobile station apparatus according to claim 8, wherein the first measuring section measures channel quality using a reception SIR of the control channel.

11. The mobile station apparatus according to claim 8, wherein the first measuring section measures channel quality using required transmission power of the control channel.

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12. A data channel assignment method whereby a mobile station to which a data channel is assigned is selected in accordance with both channel quality of a control  
5 channel for transmitting control information necessary for data transmission on a data channel and channel quality of the data channel.